## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**:

Claim 1 (original): An indium phosphide substrate containing a dopant, comprising:

an average dislocation density value of a wafer being less than 5000 $cm^{-2}$;

a ratio of the difference between a maximum value and a minimum value with respect to an average value of dopant concentration in said wafer being 30% or less;

a substantially uniform distribution of said dopant concentration in the depth direction of said wafer.

Claim 2 (original): An indium phosphide substrate containing a dopant, comprising:

an average dislocation density value of a wafer being less than 2000 $cm^{-2}$;

a ratio of the difference between a maximum value and a minimum value with respect to an average value of dopant concentration in said wafer being 30% or less;

a substantially uniform distribution of dopant concentration in the depth direction of said wafer.

Claim 3 (currently amended): An indium phosphide substrate according to Claim 1 ~~or 2~~, wherein:

diameter of said substrate is 75 mm or greater.

Claim 4 (currently amended): An indium phosphide substrate according to Claim~~s~~ 1 ~~through 3~~, wherein:

diameter of said substrate is 100 mm or greater.

Claim 5 (currently amended): An indium phosphide substrate according to Claim~~s~~ 1 ~~through 4~~,

wherein:

said dopant is Fe (iron).

Claim 6 (currently amended): An indium phosphide substrate according to Claims 1 ~~through 4~~, wherein:

said dopant is S (sulfur).

Claim 7 (currently amended): An indium phosphide substrate according to Claims 1 ~~through 4~~, wherein:

said dopant is Sn (tin).

Claim 8 (currently amended): An indium phosphide substrate according to Claims 1 ~~through 4~~, wherein:

said dopant is Zn (zinc).

Claim 9 (original): An indium phosphide crystal containing a dopant, comprising:

direction of growth being <100> orientation;

an average dislocation density value on a (100) plane, which is perpendicular to said growth direction, being less than 5000 $cm^{-2}$.

Claim 10 (original): An indium phosphide crystal containing a dopant, comprising:

direction of growth being <100> orientation;

an average dislocation density value on a (100) plane, which is perpendicular to said growth direction, being less than 2000 $cm^{-2}$.

Claim 11 (currently amended): An indium phosphide crystal according to Claim 9 ~~or 10~~, wherein:

diameter of said crystal is 75 mm or greater.

Claim 12 (currently amended): An indium phosphide crystal according to Claims 9~~-11~~, wherein:

diameter of said crystal is 100 mm or greater.

Claim 13 (currently amended): An indium phosphide crystal according to Claims 9 ~~through 12~~, wherein:

said dopant is Fe (iron).

Claim 14 (currently amended): An indium phosphide crystal according to Claims 9 ~~through 12~~, wherein:

said dopant is S (sulfur).

Claim 15 (currently amended): An indium phosphide crystal according to Claims 9 ~~through 12~~, wherein:

said dopant is Sn (tin).

Claim 16 (currently amended): An indium phosphide crystal according to Claims 9 ~~through 12~~, wherein:

said dopant is Zn (zinc).

Claim 17 (original): A method for manufacturing an indium phosphide monocrystal containing a dopant, comprising:

placing a seed crystal, which has a cross-sectional area of 15% or greater of a cross-sectional area of a crystal body, at a lower end of a growth container so that direction of growth of said crystal is <100> oriented;

placing said growth container containing said seed crystal, indium phosphide raw material, dopant, and boron oxide in a crystal growth chamber, and raising the temperature to at or above the melting point of indium phosphide;

after heating and melting boron oxide, indium phosphide raw material, dopant, and a portion

of said seed crystal, lowering the temperature of said growth container in order to grow a monocrystal with a <100> orientation in a longitudinal direction of said growth container.

Claim 18 (original): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claim 17, wherein:

said seed crystal has a cross-sectional area of 50% or greater of a cross-sectional area of said crystal body.

Claim 19 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claim 17 ~~or 18~~, wherein:

said seed crystal has a cross-sectional area of 98% or less of a cross-sectional area of said crystal body.

Claim 20 (currently amended): A method for manufacturing an indium phosphide monocrystal according to Claim~~s~~ 17~~–19~~, wherein:

in a longitudinal cross-section which includes a crystal central axis, a slope angle of a tapering region from said seed crystal to said crystal body with respect to said crystal central axis is 40 degrees or less.

Claim 21 (currently amended): A method for manufacturing an indium phosphide monocrystal according to Claim~~s~~ 17 ~~through 19~~, wherein:

in a longitudinal cross-section which includes a crystal central axis, an angle of a tapering region from said seed crystal to said crystal body with respect to said crystal central axis is 20 degrees or less.

Claim 22 (currently amended): A method for manufacturing an indium phosphide monocrystal according to Claim~~s~~ 17~~–21~~, wherein:

said seed crystal has an average dislocation density of less than 5000 $cm^{-2}$.

Claim 23 (currently amended): A method for manufacturing an indium phosphide monocrystal according to Claims ~~17–21~~, wherein:

said seed crystal has an average dislocation density of less than 2000 $cm^{-2}$.

Claim 24 (currently amended): A method for manufacturing an indium phosphide monocrystal according to Claims ~~17–23~~, wherein:

said seed crystal has an average dislocation density that is lower than a target average dislocation density of said crystal which is to be grown.

Claim 25 (currently amended): A method for manufacturing an indium phosphide monocrystal according to Claims ~~17–24~~, wherein:

after maintaining said indium phosphide raw material, dopant, and a portion of said seed crystal in a heated melted state for a fixed period of time, the temperature of said growth container is lowered in order to grow a monocrystal with a <100> orientation in a longitudinal direction of said growth container.

Claim 26 (original): A method for manufacturing an indium phosphide monocrystal according to Claim 25, wherein:

after maintaining said indium phosphide raw material, dopant, and a portion of said seed crystal in a heated melted state for 1 hour or more, the temperature of said growth container is lowered in order to grow a monocrystal with a <100> orientation in a longitudinal direction of said growth container.

Claim 27 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims ~~17–26~~, wherein:

growth rate when growing said crystal from said seed crystal is 10 mm/hour or less.

Claim 28 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims 17~~-26~~, wherein:

growth rate when growing said crystal from said seed crystal is 5 mm/hour or less.

Claim 29 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims 17~~-28~~, wherein:

growth rate when growing said crystal from said seed crystal is 2.5 mm/hour or greater.

Claim 30 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims 17~~-29~~, wherein:

said growth container is a pBN (pyrolytic boron nitride) container.

Claim 31 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims 17~~-30~~, wherein:

prior to housing said seed crystal, indium phosphide raw material, dopant, and boron oxide in said growth container, an inner surface of said growth container, at least a part which will come into contact with melt , is coated with a boron oxide film.

Claim 32 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims 17~~-31~~, wherein:

said crystal body has a diameter of 75 mm or greater.

Claim 33 (currently amended): A method for manufacturing an indium phosphide monocrystal according to Claims 17~~-32~~, wherein:

said crystal body has a diameter of 100 mm or greater.

Claim 34 (currently amended): A method for manufacturing an indium phosphide monocrystal

according to Claims 17-~~33~~, wherein:

said dopant is Fe (iron).

Claim 35 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims 17-~~33~~, wherein:

said dopant is S (sulfur).

Claim 36 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims 17-~~33~~, wherein:

said dopant is Sn (tin).

Claim 37 (currently amended): A method for manufacturing an indium phosphide monocrystal containing a dopant according to Claims 17-~~33~~, wherein:

said dopant is Zn (zinc).